IN THE CLAIMS

1. (Previously presented) An apparatus comprising:

a first therapeutic radiation source attached to a first gantry;

at least one second radiation source;

a second gantry that is rotatable, the second gantry is attached to the first gantry; and

an imager attached to an articulable end of the second gantry.

2. (Previously presented) An apparatus comprising:

a first radiation source attached to a first gantry;

at least one second radiation source, wherein the at least one second radiation source is attached to the first gantry;

a second gantry that is rotatable; and

an imager attached to an articulable end of the second gantry.

3. (Original) The apparatus of claim 1, wherein at least one second radiation source is attached to the second gantry.

4. (Currently amended) The apparatus of claim 1, wherein the first therapeutic radiation source to propagate ~~is capable of propagating~~ therapeutic energy at a first energy level.

5. (Currently amended) The apparatus of claim 1, wherein at least one second radiation source to propagate ~~is capable of propagating~~ diagnostic energy at a second energy level.

6. (Original) The apparatus of claim 1, wherein the first gantry is rotatable.

7. (Original) The apparatus of claim 6, wherein the first gantry and the second gantry are rotatable about a common pivot axis.

8. (Original) The apparatus of claim 1, wherein the imager is a multiple-energy imaging unit.

9. (Currently amended) The apparatus of claim 1, wherein the articulable end comprises ~~includes~~ at least one pivot point between the second gantry and the imager.

10. (Currently amended) The apparatus of claim 1, wherein the articulable end comprises ~~includes~~ a sliding mechanism capable of translating the imager in a plane.

11. (Currently amended) An apparatus comprising:

a first radiation source attached to a first gantry;

at least one second radiation source;

a second gantry that is rotatable, wherein the second gantry is ~~one of the at least one second radiation source is attached to a sliding mechanism~~ capable of extending and

retracting the second radiation source attached to ~~from~~ the second gantry; and

an imager attached to an articulable end of the second gantry.

12. (Original) The apparatus of claim 1, wherein the articulable end is capable of folding the imager against the second gantry.

13. (Original) The apparatus of claim 7, wherein the second gantry is nestled within the first gantry.

14. (Currently amended) A method for applying radiation, comprising:

positioning a diagnostic X-ray ~~radiation~~ source to be in alignment with a target volume;

positioning an imager at one of a plurality of distances from the target volume to receive radiation from the diagnostic X-ray ~~radiation~~ source;

positioning a therapeutic radiation source to be in alignment with the target volume; and

re-positioning the imager to receive radiation from the therapeutic radiation source.

15. (Currently amended) The method of claim 14, further comprising:

propagating ~~the~~ diagnostic X-ray radiation from the diagnostic X-ray source toward the target volume;

receiving the diagnostic X-ray radiation ~~by~~ on the imager after passing through the target volume;

positioning the therapeutic radiation source ~~is~~ based on results of the diagnostic X-ray radiation to the imager;

propagating the therapeutic radiation into the target volume;

receiving the therapeutic radiation by the imager after passing through the target volume; and

generating verification data by the imager from the therapeutic radiation.

16. (Original) The method of claim 14, wherein the imager is a multiple-energy imaging unit.

17. (Currently amended) The method of claim 14, further comprising[[;]] placing an internal seed to act as a marker for the target volume.

18. (Currently amended) The method of claim 15, further comprising generating multiple diagnostic X-ray radiation slices using a fan X-ray beam to provide a 3-dimensional reconstruction of the target volume.

19. (Original) The method of claim 15, further comprising generating a cone X-ray beam where volumetric information can be constructed.

20. (Currently amended) The method of claim 15, wherein the diagnostic X-ray radiation can be operated continuously to provide real time a fluoroscopic image of moving internal anatomy.

21. (Currently amended) The method of claim 15, wherein the diagnostic X-ray radiation can be operated in a pulsed manner to provide a quasi-real time fluoroscopic image of moving internal anatomy.

22. (Original) A method for imaging radiation, comprising:

positioning a multiple-energy imaging unit normal to a first axis to receive radiation at a first energy level;

propagating radiation by a first radiation source at the first energy level along the first axis;

retracting the first radiation source and positioning a second radiation source along the first axis.

maintaining the multiple-energy imaging unit normal to the first axis to receive radiation by the second radiation source; and

propagating radiation by the second radiation source.

23. (Original) The method of claim 22, further comprising:

rotating the first radiation source until clear of the second radiation source;

extending the first radiation source to be in line with the multiple-energy imaging unit;

propagating radiation at a first energy level toward the multiple-energy imaging unit.

24. (Original) The method of claim 22, further comprising pivoting two arms independently, the first arm attached to the first radiation source for propagating at the first energy level, and the second arm attached to the second radiation source for propagating at the second energy level.

25. (Original) The method of claim 24, wherein the multiple-energy imaging unit is attached to the second arm.

26. (Currently amended) An apparatus, comprising:

a therapeutic energy source attached to a first gantry;

a diagnostic X-ray energy source attached to a retractable ~~translatable~~ end of a second gantry;

a multiple-energy imaging unit attached to an opposite articulable end of the second gantry;

the first gantry and the second gantry independently pivotable and attached at a common axis;

a patient couch capable of translation, wherein the result of such pivoting and translation is to place a target volume of a patient between the multiple-energy imaging unit aligned with the diagnostic energy source or the therapeutic energy source.

27. (Cancelled)